Examiner Griffin:

This is in response to an outstanding Office Action in the above-identified application mailed September 30, 2002, with a shortened statutory period for response of three (3) months, set to expire December 30, 2002.

Assistant Commissioner for Patents is authorized to withdraw any additional moneys required for this purpose from Deposit Account No. 01-0528.

IN THE CLAIMS

Please cancel, without prejudice, Claim 3.

Kindly amend Claims 1, 12 to 15, inclusive, and 20 to read as follows:

1. A process for the production of refinery transportation fuel or blending components for refinery transportation fuel, which process comprises:

providing organic feedstock comprising a mixture of organic compounds derived from natural petroleum, the mixture having a gravity ranging from about 10° API to about 100° API;

contacting a gaseous source of dioxygen with the organic feedstock in a liquid reaction medium containing a soluble catalyst system comprising at least one multi-valent and/or heavy metal while maintaining the liquid reaction medium substantially free of halogen and/or halogen-containing compounds, to form a mixture of immiscible phases comprising hydrocarbons, oxygenated organic compounds, water of reaction, and acidic co-products;

separating from the mixture of immiscible phases at least a first organic liquid of low density comprising hydrocarbons, oxygenated organic compounds and acidic co-products, and second liquid of high density which contains at least portions of the catalyst metal, water of reaction and acidic co-products;

contacting at least a portion of the separated organic liquid with a neutralizing agent; and

recovering a product having a low content of acidic co-products.

12. The process according to claim 21 wherein the neutralizing agent is an aqueous solution of a chemical base in the form of carbonate or bicarbonate, and the recovered oxygenated product exhibits a total acid number of less than about 20 mg KOH/g.

13. The process according to claim 21 wherein the neutralizing agent is an aqueous solution of a compound selected from the group consisting of sodium, potassium, barium, calcium and magnesium in the form of carbonate or bicarbonate, and the recovered oxygenated product exhibits a total acid number of less than about 20 mg KOH/g.

14. The process according to claim 21 wherein all or at least a portion of the organic feedstock is a product of a process for hydrogenation of a petroleum distillate consisting essentially of material boiling between about 50° C. and about 425° C. which hydrogenation process includes reacting the petroleum distillate with a source of hydrogen at hydrogenation conditions in the presence of a hydrogenation catalyst to assist by hydrogenation removal of sulfur and/or nitrogen from the hydrotreated petroleum distillate.

15. A process for the production of refinery transportation fuel or blending components for refinery transportation fuel, which process comprises:

partitioning by distillation an organic feedstock comprising a mixture of organic compounds derived from natural petroleum, the mixture consisting essentially of material boiling between about 75° C. and about 425° C. to provide at least one low-boiling organic part consisting of a sulfur-lean, mono-aromatic-rich fraction, and a high-boiling organic part consisting of a sulfur-rich, mono-aromatic-lean fraction;

contacting a gaseous source of dioxygen with at least a portion of the low-boiling organic part in a liquid reaction medium containing a soluble catalyst system comprising a source of at least one catalyst metal selected from the group consisting of manganese, cobalt, nickel, chromium, vanadium, molybdenum, tungsten, tin, cerium, or mixture thereof, while maintaining the liquid reaction medium substantially free of halogen and/or halogen-containing compounds, to form a mixture of immiscible phases comprising hydrocarbons, oxygenated organic compounds, water of reaction, and acidic co-products;

separating from the mixture of immiscible phases at least a first organic liquid of low density comprising hydrocarbons, oxygenated organic compounds and acidic co-products and second liquid of high density which contains at least portions of the catalyst metal, water of reaction and acidic co-products; and

A2 contacting all or a portion of the separated organic liquid with a neutralizing agent and recovering a low-boiling oxygenated product having a low content of acidic co-products; and

contacting the high-boiling organic part with an immiscible phase comprising at least one organic peracid or precursors of organic peracid in a liquid reaction mixture maintained substantially free of catalytic active metals and/or active metal-containing compounds and under conditions suitable for oxidation of one or more of the sulfur-containing and/or nitrogen-containing organic compounds;

separating at least a portion of the immiscible peracid-containing phase from the oxidized phase of the reaction mixture; and

contacting the oxidized phase of the reaction mixture with a solid sorbent, an ion exchange resin, and/or a suitable immiscible liquid containing a solvent or a soluble basic chemical compound, to obtain a high-boiling product containing less sulfur and/or less nitrogen than the high-boiling part.

20. The process according to claim 15 wherein the oxidation feedstock is a high-boiling distillate fraction consisting essentially of material boiling between about 200° C. and about 425° Cderived from hydrotreating of a refinery stream.

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